Surface Reanalysis

Module 6

Overview

- General Information
  - Purpose
  - Objectives
  - Steps
  - Application

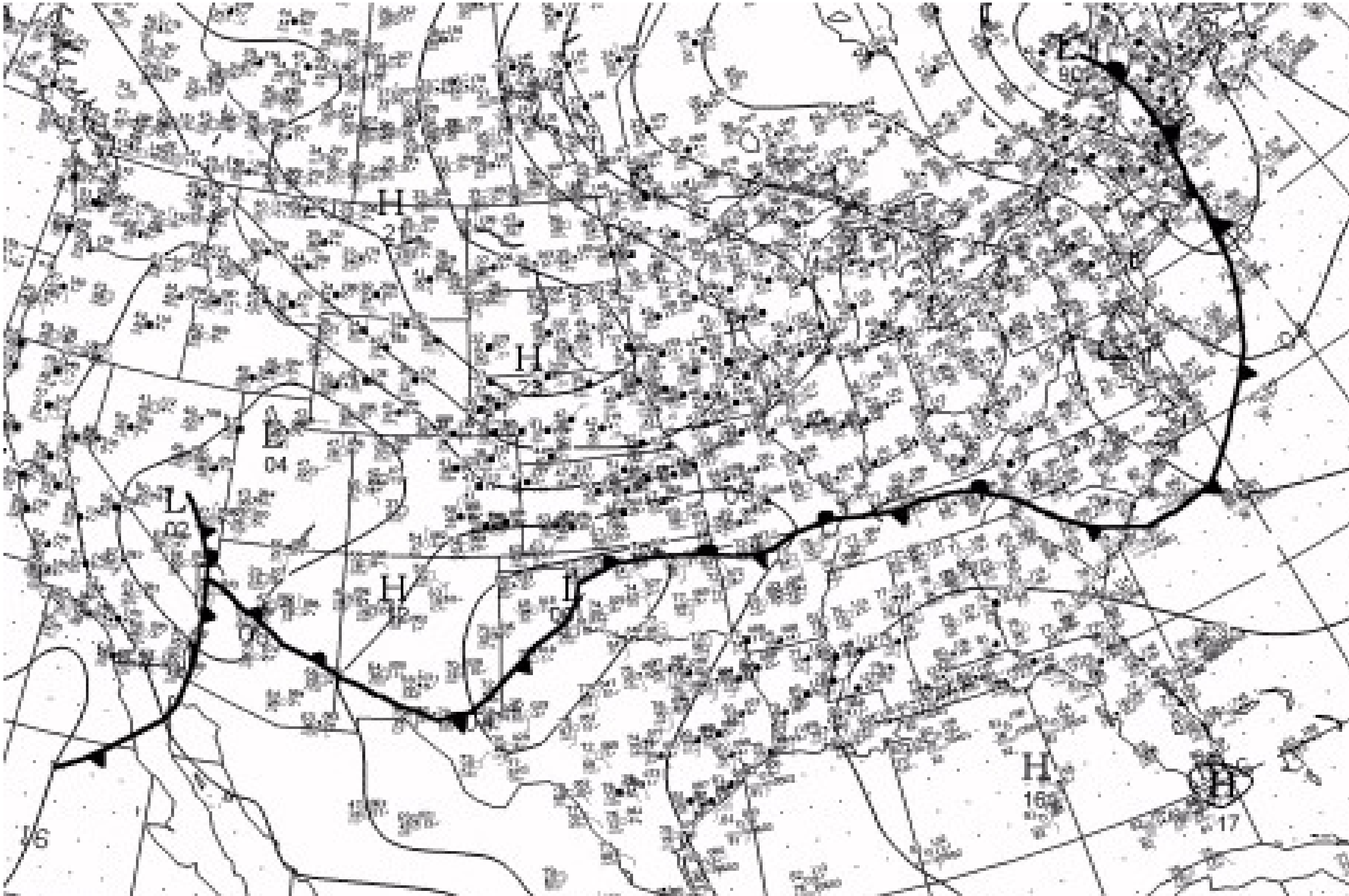
Objective

Given a computer analyzed surface chart, reanalyze the chart to the satisfaction of the evaluator as indicated by a Go/No Go checklist.

Steps

- Scan
  - Look for bad data
  - Pressure centers
  - Circulations
  - General flow

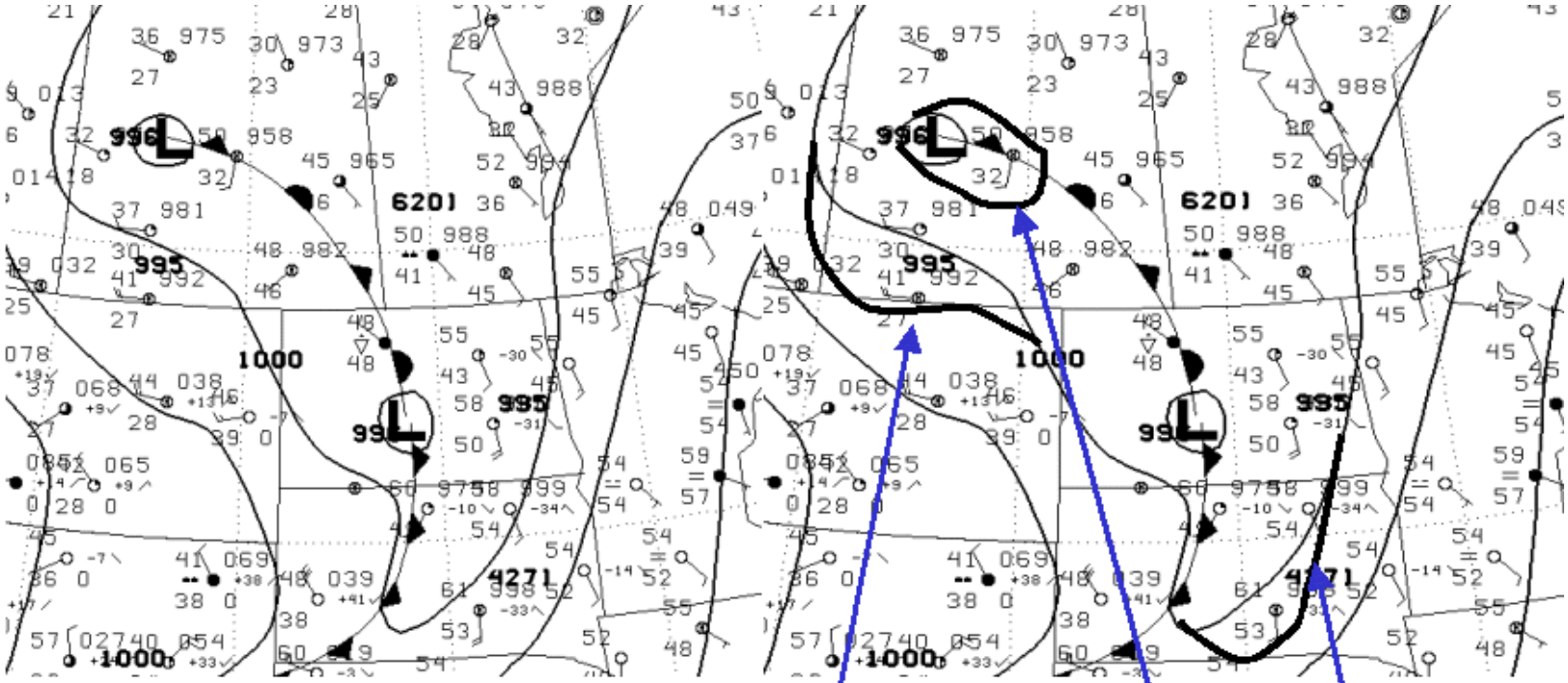
Surface Chart



Isobars

- Remember the purpose of an isobaric analysis—to show small-scale troughs, ridges, and pressure centers.
- Buy Ballot’s Law
- Flow smoothly and naturally
- Directly related to wind speed
- Labeling

Difference in Computer Analysis and Reanalysis of Isobars

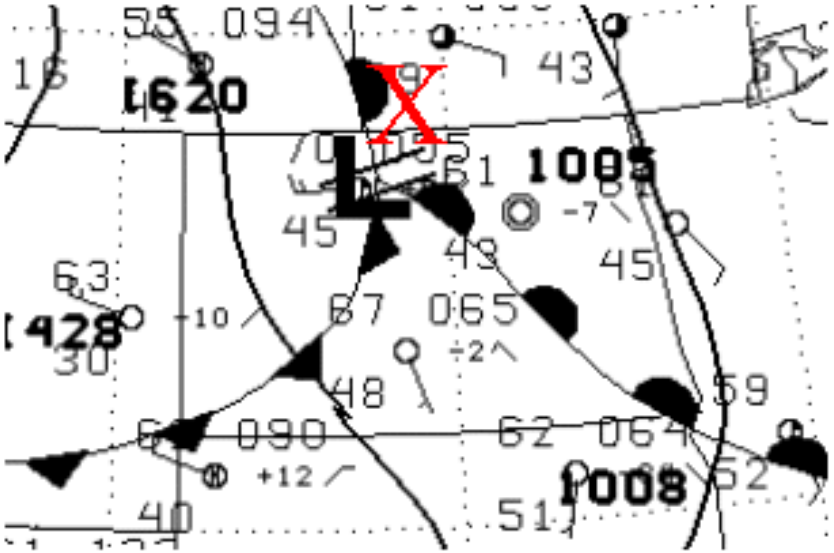


Notice the difference in isobars between the computer analysis on the left and the reanalysis on the right.

Pressure Centers

- Location, location, location
  - Located outside correct flow center
  - Central pressure mislabeled
  - Round pressure values too high or low

Computer Analyzed Low and Location After Reanalysis

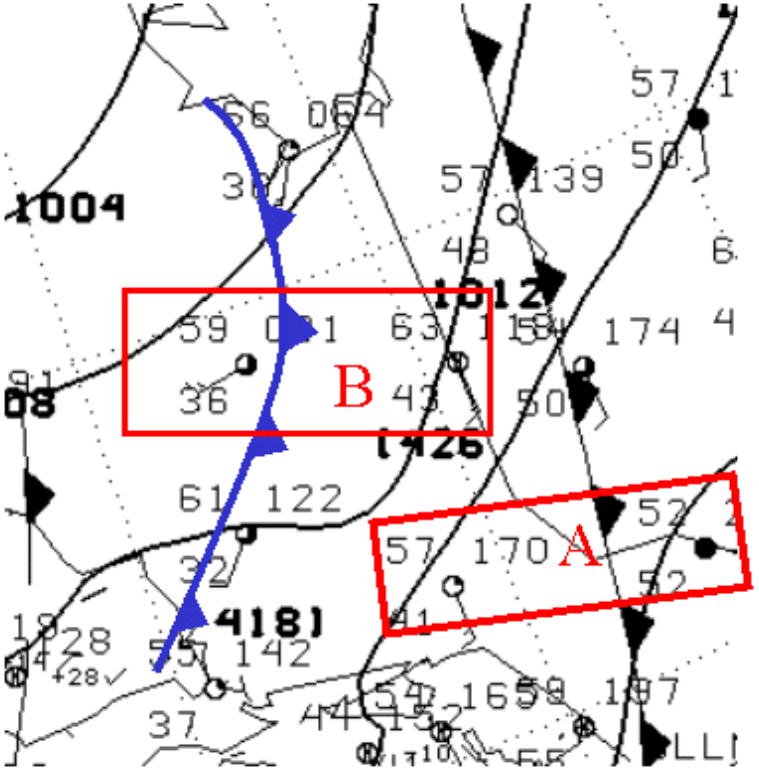


Notice the computer placed the low south of the west wind. It should be reanalyzed to the location marked by the X.

Fronts

- Data may be suspect---continuity
- Fronts improperly designated
- Troughs represented as fronts
- The omission of fronts

Computer Analyzed Front Vs. Reanalyzed Front



Notice in box A the rise in temperature behind the cold front and the winds do not change direction.

However, in box B notice the correct temperature and dew point fall, and the change in wind direction.

Notice the lack of a isobaric trough with the computer front and the trough at the reanalyzed front.

Summary

- Importance of doing a reanalysis
- Minor features on a surface chart that are often omitted during a computer analysis can be the reason for a lot of unforecasted weather.
- Don’t use the charts blindly, take the time to do a proper reanalysis, it will pay a lot of dividends in your forecast accuracy.

Conclusion

Any Questions?